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NINTH ANNUAL REPORT

ADVISORY COMMITTEE ON WILDERNESS AREAS AND ECOLOGICAL RESERVES

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TOURISM, PARKS AND RECREATION

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ALBERTA
TOURISM, PARKS AND RECREATION

Office of the Minister

July 31, 1992

The Honourable Dr. David Carter
Speaker of the Legislative Assembly of Alberta

Sir:

I have the honour of transmitting the Ninth Annual Report of the Advisory Committee on Wilderness Areas and Ecological Reserves.

Respectfully submitted,

D. N. Sparrow

Don Sparrow
Minister
Tourism, Parks and Recreation

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60 ANNIVERSARY
PARKS 1932-1992

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Provincial Parks Service

Standard Life Centre, 10405 Jasper Avenue, Edmonton, Alberta, Canada T5J 3N4

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July 31, 1992

The Honourable Don Sparrow
Minister of Tourism, Parks and Recreation
424 Legislature Building
Edmonton, Alberta
T5K 2B6

Sir:

I have the honour of transmitting the Ninth Annual Report of the Advisory Committee on Wilderness Areas and Ecological Reserves.

Respectfully submitted,

Donn E. Cline
Chairman
Advisory Committee on Wilderness
Areas and Ecological Reserves

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STATEMENT OF THE CHAIRMAN

The advisory committee spent the year in a far-reaching review of the ecological reserves program and its legislation. Public input and involvement, which was part of this review, led to considerable consensus as to what is required to improve the program and make it more effective. This annual report contains the recommendations of that review.

In May of 1991, the program's newsletter, *ECO-ALBERTA*, was launched and by year's end had put out two issues. The newsletter is primarily aimed at those managers and staff who are working with and planning the management of ecological reserves.

ECO-ALBERTA also informs other people about the ecological reserves program, including members of the legislative assembly who have reserves in or near their constituency, and members of public interest groups in the province. Other agencies across Canada that have ecological reserve programs also receive the newsletter.

The highlight of the year was the cooperation received from Husky Oil in support of establishing Plateau Mountain Ecological Reserve.

In late July the Honourable Dr. Stephen C. West, Minister of Recreation and Parks, announced his intent to establish this reserve. Mr. Art Price, President of Husky Oil, also spoke in support of the ecological reserve, and of the need for corporations to support community initiatives. The reserve was officially established on December 12, 1991.

In September, we were able to recruit a practicum student from the University of Alberta. That student assembled our first comprehensive annotated bibliography of inventory and research work that has been completed in Alberta's ecological reserves. This bibliography will be of value to ecological reserve managers, as well as to researchers. It has been circulated to a number of individuals and agencies and is available upon request.

On February 24, 1992, the Honourable Don Sparrow was sworn in as the Minister of a new Department of Tourism, Parks and Recreation, including responsibility for the ecological reserves program. He took an immediate interest in the program and we look forward to working with him in the year ahead.

On March 11th, at a news conference in Calgary, at which His Royal Highness the Duke of Edinburgh attended in his role as International President of the World Wildlife Fund, Mr. Sparrow pledged a continuing commitment to the ecological reserves program. This commitment included the intent to designate Ross Lake, Egg Island and Middle Sand Hills as new ecological reserves through the established process. This process includes the holding of open houses to receive public input. An open house has yet to be held for Middle Sand Hills candidate ecological reserve.

With the commitment to designate three new ecological reserves, the committee will go into the year ahead with clear direction and a renewed sense of purpose.

Mr. Sparrow also stated his intent to renew the Advisory Committee for another three years after its present term expires on November 30, 1992.

Donn Cline
Chairman

ROLE OF THE ADVISORY COMMITTEE

The Advisory Committee on Wilderness Areas and Ecological Reserves has been appointed to represent the interests of the general public as they pertain to wilderness areas and ecological reserves and to advise the Minister of Alberta Tourism, Parks and Recreation on matters relevant to those interests. The committee's role is advisory and does not include the authority to make decisions. The ultimate responsibility for decision-making on all matters relevant to wilderness areas and ecological reserves rests with the Minister of Alberta Tourism, Parks and Recreation.

The guiding principle in the work of the advisory committee is reconciling the system of wilderness areas and ecological reserves in Alberta with the many interests of the public as a whole.

The advisory committee was established pursuant to Section 2 of the Wilderness Areas, Ecological Reserves and Natural Areas Act (RSA 1980, Chapter W-8). The role of the advisory committee as set out in Section 2(7) of the Act is as follows:

2(7) The advisory committee shall receive and consider requests from the public regarding wilderness areas and ecological reserves and may make recommendations to the minister regarding:

(a) the establishment of new wilderness areas or ecological reserves;

(b) the addition of lands to wilderness areas or ecological reserves;

(c) withdrawal of lands from wilderness areas or ecological reserves; and

(d) the making of regulations for the administration, management, operation and utilization of wilderness areas, ecological reserves and controlled buffer zones.

ADVISORY COMMITTEE MEMBERSHIP

Membership of the advisory committee is set out in the Wilderness Areas, Ecological Reserves and Natural Areas Act as follows:

2(1) The Lieutenant Governor in Council shall establish a committee called the "Advisory Committee on Wilderness Areas and Ecological Reserves" consisting of 12 members and shall designate one of the members as chairman.

(2) The Lieutenant Governor in Council may prescribe the term of office of any member of the committee and the term of office of the chairman.

(3) The minister shall designate a member of the advisory committee as secretary to the committee.

(4) The advisory committee shall consist of:

(a) 2 employees of the Department of Recreation and Parks **[now Tourism, Parks and Recreation]**
(b) 1 employee of the Department of Energy,
(c) 2 employees of the Department of Forestry, Lands and Wildlife,
(d) 1 employee of the Department of Culture and Multiculturalism, and
(e) 6 persons who are not employed by the government or a government agency.

Members of the advisory committee as appointed by Order-In-Council are:

Donn Cline.....[***Chairman***] Alberta Tourism, Parks and Recreation
Christian Andersen.....Grande Prairie
William Byrne.....Alberta Culture and Multiculturalism
Dave Chabillon.....Alberta Tourism, Parks and Recreation
Jack Clements.....Edmonton
Michael Day.....Alberta Energy
Horst Fauser.....Lethbridge
Thomas Gilchrist.....Milk River
Ken Higginbotham.....Alberta Forestry, Lands and Wildlife
Ken Kultgen.....Foremost
Peter Orlecki .....Two Hills
Murray Turnbull.....Alberta Forestry, Lands and Wildlife

THE ECOLOGICAL RESERVES PROGRAM - A SYNOPSIS

Ecological reserves are areas established as examples of naturally functioning ecosystems representative of the six Natural Regions of Alberta (see map on page 10). Biological, geographical or geological features that are rare, unusual or otherwise special are also protected.

The Alberta government recognizes that the preservation of natural environments and the plants and animals they sustain is fundamental to advances in industries such as agriculture, forestry and medicine. As such, these protected areas serve as outdoor classrooms and laboratories for environmental education and scientific research. They also allow us an opportunity to study how natural processes shape the environment. Perhaps most importantly, they are tangible evidence of Alberta's commitment to share the land with its other inhabitants.

The increase in support from Albertan's for ecological reserves reflects a greater understanding of the long-term benefits of protecting representative examples of the province's varied landscapes. Organizations and individual members of the public are recognized as important contributors in identifying and nominating sites for future consideration as ecological reserves. Both public and government input was an important element in identifying the original list of sites proposed for ecological reserve status. Additionally, public open houses are held prior to establishing a site as an ecological reserve for purposes of obtaining public input on what is being recommended.

The Ecological Reserves Program currently has 13 reserves designated by Order in Council (see the *Natural Regions of Alberta* map on page 10 for general locations). These are:

1. Athabasca Dunes

- established June 25, 1987
- contains 14.55 square miles (9315 ac.; 3769 ha)
- contains ecosystems representative of the Athabasca Plain Subregion of the Canadian Shield Natural Region, including: active and stabilized sand dunes, jackpine-aspen woodlands and jackpine-black spruce dry bogs
- contains special features including: kame deposits, active sand-grass communities, and one large active transverse dune
- the dunes were created through glacial and wind action on sandstone and granite

2. Crow Lake

- established June 25, 1987
- contains 3.62 square miles (2319 ac.; 938 ha)
- contains ecosystems representative of the Mixedwood Subregion of the Boreal Forest Natural Region, including: upland spruce, pine and aspen forests; patterned fens, marshes and bogs
- contains special features including: bald eagles, woodland caribou and rare plants
- little evidence of human disturbance

3. Goose Mountain

- established June 25, 1987
- contains 4.81 square miles (3080 ac.; 1246 ha)
- contains ecosystems and features representative of the Northern Outliers Subregion of the Foothills Natural Region, including: colluvial slopes, bedrock ridges, fir-spruce-pine forests, and tall shrub thickets
- contains special features including: subxeric herb meadows, seepage areas, and species normally found much further to the west in foothill habitats.
- high uplands in the reserve were not glaciated during the last Ice Age

4. Kootenay Plains

- established June 25, 1987
- contains 12.37 square miles (7917 ac.; 3204 ha)
- contains ecosystems representative of the Montane Subregion of the Rocky Mountain Natural Region, including: wheatgrass-sagebrush grasslands, white spruce-lodgepole pine forests, and limber pine forests
- contains special features including: calcareous fens, calcareous cliff habitats, rare plants (e.g., clustered broom-rape)
- the geomorphology, low precipitation and winds of the area are significant factors that influence the distributuion and composition of plant and animal communities of the Kootenay Plains

5. Marshybank

- established June 25, 1987
- contains 3.2 square miles (2050 ac.; 829 ha)
- contains ecosystems representative of the Main Foothills Subregion of the Foothills Natural Region, including: pine-feathermoss forests, pine-spruce forests, peatlands, sedge fens and meadows
- contains special features including: marl pools, slumps, and rare plants (e.g., Greenland primrose)
- the reserve contains two distinct biophysical areas. The first is a terrace-like lowland of lodgepole pine, black spruce fens and willow-birch wetlands. The second is an area of extensive bedrock ridges with young lodgepole pine growing amidst mature stands of Engelmann spruce.

6. Silver Valley

- established June 25, 1987
- contains 6.97 square miles (4460 ac.; 1805 ha)
- contains ecosystems representative of the Peace River Subregion of the Parkland Natural Region, including: aspen forests, wild rye-shrub parkland and steep slope speargrass grasslands
- contains special features including: slumps, drainage coulees, and rare and uncommon plants (e.g., long-leaved sage and arctic aster)
- plant communities at Silver Valley are strongly influenced by the valley slopes of the Peace River and the numerous tributary creeks flowing through the area
- a wildfire of 1936 burned most of the area

7. Whitemud Falls

- established June 25, 1987
- contains 3.3 square miles (2137 ac.; 864 ha)
- contains ecosystems representative of the Mixedwood Subregion of the Boreal Forest Natural Region, including: spruce-aspen forests, pine-lichen woodlands, grass-sedge meadows and willow shrublands
- contains special features including: rare plants (e.g., spotted Joe-pye weed), waterfalls, gorges, rapids, caves, cliffs, 25 metre dolomite stacks, and a small dune field

8. Kennedy Coulee

- established October 22, 1987
- contains 4.13 square miles (2640 ac.; 1068 ha)
- contains ecosystems representative of the Mixed Grassland Subregion of the Grassland Natural Region, including: blue grama-wheatgrass-speargrass grasslands, ponds, alkaline wetlands and coulees with aspen woodlands
- contains special features including: springs, rare plants (e.g., cushion everlasting), nesting ferruginous hawks, populations of species peripheral to Alberta (e.g., olive-backed pocket mouse, short-horned lizard, shrubby evening primrose)
- borders the Canada/U.S. boundary

9. Hand Hills

- established January 14, 1988
- contains 8.61 square miles (5507 ac.; 2229 ha)
- contains ecosystems representative of the Northern Fescue Subregion of the Grassland Natural Region, including: fescue grassland communities, alkaline seepage areas, seasonal sloughs and moist meadows
- contains special features including: nesting habitat for the endangered piping plover, populations of upland sandpipers and thirteen-lined ground squirrels, and rare plants (e.g. crowfoot violet)
- several steep-sided drainage valleys cut through the area
- a system of high rolling hills are present in the southern portion

10. Wainwright Dunes

- established January 14, 1988
- contains 10.89 square miles (6970 ac.; 2821 ha)
- contains ecosystems representative of the Central Subregion of the Parkland Natural Region, including: aspen groves, speargrass-rough fescue grasslands and stabilized sand dunes
- contains special features including: a sloping fen, springs, dune "blowouts", species at the southern end of their range (e.g., red squirrels, ovenbirds,) and uncommon plants (e.g., oblong-leaved sundew)
- the reserve contains dunes up to 30 metres high
- the area includes a unique mixture of southern grasslands, boreal forest and parkland vegetation types

11. Upper Bob Creek

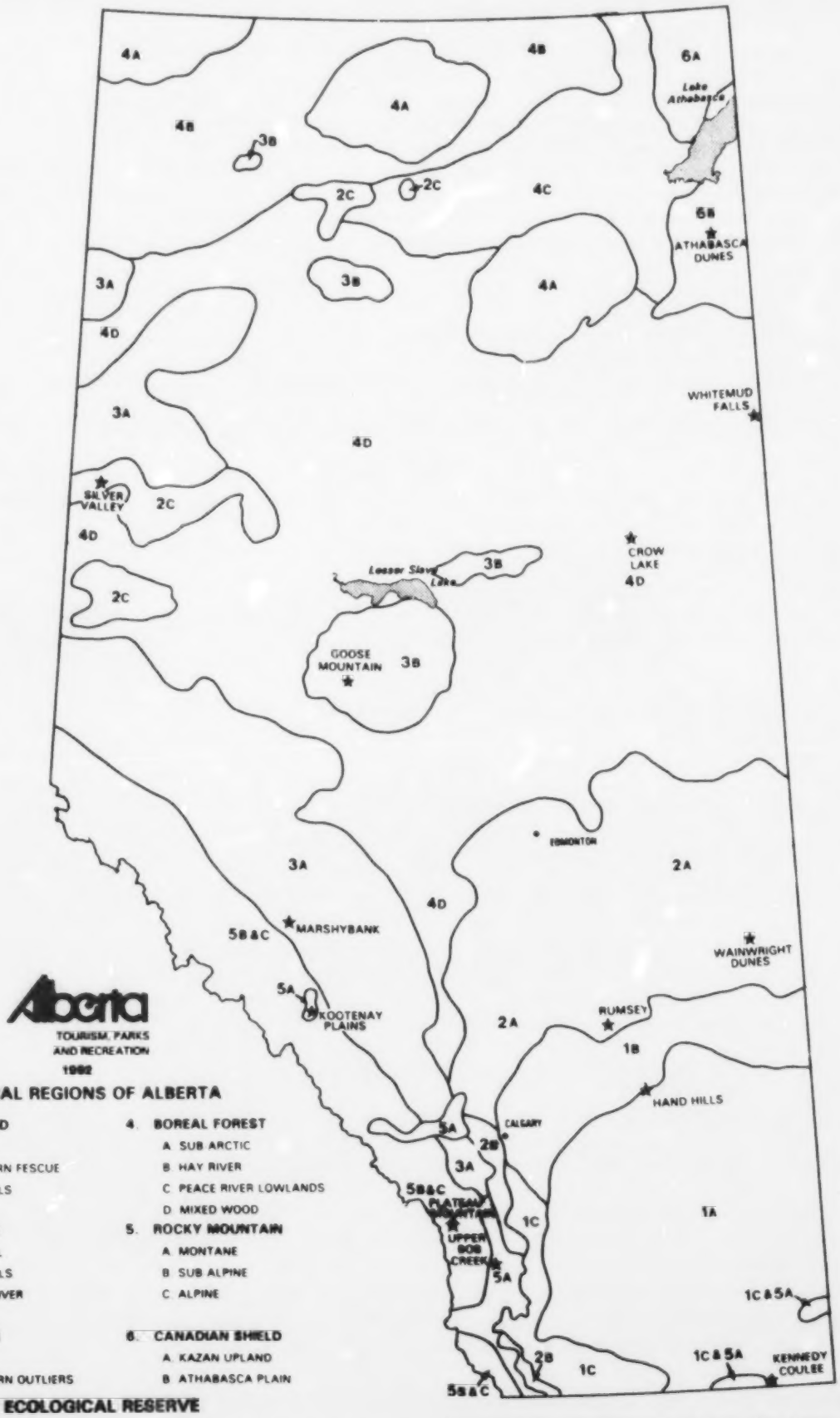
- established February 16, 1989
- contains 10.04 square miles (6427 ac.; 2600 ha)
- contains ecosystems representative of the Montane Subregion of the Rocky Mountain Natural Region, including: Douglas fir forests, Douglas fir-limber pine forests, aspen forests, fescue-oatgrass grasslands and willow shrublands
- contains special features including: north-south ridges, rare plants (e.g., little rice grass), populations of hoary marmots, golden-mantled ground squirrels and lazuli buntings, and an elk wintering range

12. Rumsey

- established September 13, 1990
- contains 13.25 square miles (8480 ac.; 3431.8 ha)
- contains ecosystems representative of the Central Parkland Subregion of the Parkland Natural Region, including: aspen groves, fescue grasslands, alkaline meadows, wet meadows and ponds, and silverberry-buckbrush plant communities
- contains special features including: esker-like ridges, ungrazed fescue grassland, rare mammals (e.g., prairie vole), uncommon birds (e.g., Baird's sparrow), and uncommon plants (e.g., reflexed locoweed)
- contains a significant parcel of the largest remaining aspen parkland ecosystem left in Canada

13. Plateau Mountain

- established December 12, 1991
- contains 8.97 square miles (5740 ac.; 2322.9 ha)
- contains ecosystems representative of the Alpine and Subalpine Subregion of the Rocky Mountain Natural Region, including: Engelmann spruce-subalpine fir forests; lodgepole pine forests; shrub, sedge and lichen-sedge tundra; krummholz; and, alpine meadows.
- contains special features including: spruce-fir forests with whitebark pine; an internationally recognized ice cave; patterned ground features such as sorted stone circles, polygons, nets, stripes and frost boils; colluvial slopes; rare plants (e.g., Arctic butterweed, flame-coloured lousewort); and, critical wildlife habitat (e.g., winter range for bighorn sheep).
- periglacial landforms on the summit are strongly influenced by the underlying permafrost, the prevailing climatic conditions, and the gently sloping to flat surface of the mountaintop.


4A
4B
4A
4B
6A
Lake Athabasca
3B
2C
2C
4C
6B
ATHABASCA DUNES
3A
3B
4A
4D
WHITEMUD FALLS
3A
4D
SALVER VALLEY
2C
4D
CROW LAKE
4D
Lesser Slave Lake
3B
2C
GOOSE MOUNTAIN
3B
EDMONTON
3A
2A
4D
5B&C
MARSHYBANK
WAINWRIGHT DUNES
5A
KOOTENAY PLAINS
RUMSEY
2A
1B
HAND HILLS
5A
CALGARY
2B
3A
5B&C
PLATEAU MOUNTAIN
1C
1A
UPPER BOW CREEK
5A
1C&5A
2B
1C
1C&5A
KENNEDY COULEE
5B&C
Alberta
TOURISM, PARKS AND RECREATION
1992
NATURAL REGIONS OF ALBERTA
1. GRASSLAND
A MIXED
B NORTHERN FESCUE
C FOOTHILLS
2. PARKLAND
A CENTRAL
B FOOTHILLS
C PEACE RIVER
3. FOOTHILLS
A MAIN
B NORTHERN OUTLIERS
4. BOREAL FOREST
A SUB ARCTIC
B HAY RIVER
C PEACE RIVER LOWLANDS
D MIXED WOOD
5. ROCKY MOUNTAIN
A MONTANE
B SUB ALPINE
C ALPINE
6. CANADIAN SHIELD
A KAZAN UPLAND
B ATHABASCA PLAIN
★ ECOLOGICAL RESERVE
Produced by Management Support Branch Provincial Parks Service
Base constructed by Land Information Services Division, Alberta Forestry, Lands and Wildlife

MANAGEMENT PLANNING - STATUS REPORT

To effectively manage the resources contained within an ecological reserve, a plan is required that outlines the acceptable focus and direction for dealing with the potential management issues of that reserve. The general process for producing a management plan and the responsibilities at each stage of the process are presented in the following; and is only intended for illustrative purposes, not as a recommendation of the advisory committee of an absolute planning process. Once a lead government department is identified as the one responsible for undertaking the management planning for a particular ecological reserve, it is their obligation to ensure that the plan proceeds through to completion. The chart on the following page indicates the status of the management planning process for each of the 13 established ecological reserves.

STEP 1: ***PREPARATION OF A TERMS OF REFERENCE***

- responsibility: lead government department

STEP 2: ***APPROVAL OF A TERMS OF REFERENCE***

- responsibility: lead government department submits document to the Ecological Reserves Steering Committee (E.R.S.C.) for approval.**

STEP 3: ***IDENTIFICATION OF A PLANNING TEAM***

- responsibility: lead government department. [The Planning Team may include public representation]

STEP 4: ***PREPARATION OF A DRAFT PLAN***

- responsibility: lead government department

STEP 5: ***REVIEW OF THE DRAFT PLAN***

- responsibility: lead government department submits document to the E.R.S.C. for review. The lead department also obtains any necessary public input on the draft plan prior to preparing the final plan.

STEP 6: ***PREPARATION OF THE FINAL PLAN***

- responsibility: lead government department

STEP 7: ***APPROVAL OF THE FINAL PLAN***

- responsibility: lead government department submits document to the E.R.S.C. for review and endorsement. That committee forwards the plan, if acceptable, to the Minister of Tourism, Parks and Recreation with recommendations for plan approval. The Minister may also wish to have the advisory committee review and submit its recommendations on the final plan.

STEP 8: ***IMPLEMENTATION OF THE PLAN***

- responsibility: lead government department and/or land managing agency

STEP 9: ***FUTURE REVIEW AND REVISION OF THE PLAN***

- responsibility: lead government department

**The E.R.S.C. is comprised of the six government members of the Advisory Committee plus the Assistant Deputy Minister of the Fish and Wildlife Division. The committee focuses on the integration of government agency interests which pertain to the ecological reserves program.

FIGURE 1

Steps in the planning process that **have been completed** by March 31, 1992 for each of the 13 established ecological reserves. The letter "**p**" in a box indicates that a particular step is in progress, but not yet completed.

****Steps 1-9 correspond to the steps outlined on page 11.**

ECOLOGICAL RESERVE	STEPS IN THE PLANNING PROCESS**								
	#1	# 2	# 3	#4	#5	#6	#7	#8	#9
Athabasca Dunes[2]									
Crow Lake[1]						p			
Goose Mountain[1]				p					
Hand Hills[2,4]						p			
Kennedy Coulee[3,4]							p		
Kootenay Plains[2]									
Marshybank[2]									
Plateau Mountain[5]									
Rumsey[2]									
Silver Valley[1]				p					
Upper Bob Creek[1,4]				p					
Wainwright Dunes[3]				p					
Whitemud Falls[2]									

[1] = The Alberta Forest Service is responsible for preparing a management plan.

[2] = The Provincial Parks Service is responsible for preparing a management plan.

[3] = The Public Lands Division is responsible for preparing a management plan.

[4] = Members of the public and/or public groups have been involved in the preparation of the management plan for this reserve.

[5] = Kananaskis Country is responsible for preparing a management plan.

NOTE: The E.R.S.C. has changed the responsibility for initiating, chairing and coordinating the preparation of management plans for Athabasca Dunes, Kootenay Plains, Marshybank, Rumsey and Whitemud Falls from Alberta Forestry, Lands and Wildlife to the Provincial Parks Service.

SUMMARY OF ADVISORY COMMITTEE MEETINGS AND ACTIVITIES

July 4, 1991 - Edmonton

At this meeting, the advisory committee welcomed Mr. Dave Chabillon, Assistant Deputy Minister of the Provincial Parks Service. Mr. Chabillon will be functioning as one of the two Department of Recreation and Parks (now Tourism, Parks and Recreation) members on the committee; the other being the Chair, Mr. Donn Cline.

The *ECO-ALBERTA* newsletter was also discussed. It is the intent to publish the newsletter approximately three to four times per year. The target market is primarily people involved in the ecological reserves program from a planning, administrative and management perspective.

Discussion also occurred on the task of reviewing the Wilderness Areas, Ecological Reserves and Natural Areas Act; particularly, confirming the original purpose of the task and the process to follow in future discussions. Reports that had been produced relative to a review of the act were also discussed as well as the reviews and communications that have occurred to date. It was agreed that the scope of the original exercise should be broadened to include all issues relative to the ecological reserves program that were felt to be of some concern, not just legislative ones. To accomplish this, it was deemed appropriate to focus again on all the issues and concerns which were outlined in the report that summarized the results of the public interest group presentations. The balance of the meeting was used in a workshop format for reviewing the content of that report, discussing its issues, and initial drafting of recommendations for eventual presentation to the minister. This work was not completed at the close of the meeting so the committee agreed to meet again on October 10th to complete the task.

July 31, 1991 - Edmonton

On this date, the intent to establish Plateau Mountain as Alberta's 13th ecological reserve was publicly announced by the Minister of Alberta Recreation and Parks on behalf of the Advisory Committee on Wilderness Areas and Ecological Reserves. This action brings to fruition the recommendations of the advisory committee as set out in their Seventh Annual Report regarding the establishment of this area as an ecological reserve.

October 10-11, 1991 - Edmonton

The advisory committee met primarily to finish the drafting of recommendations related to improving the Wilderness Areas, Ecological Reserves and Natural Areas Act and the ecological reserves program in general. Discussion and resolution of issues and the drafting of recommendations took up most of the available time at the meeting. The committee also reviewed and provided input on the draft Eighth Annual Report.

December 9, 1991 - Edmonton

The advisory committee met to finalize the recommendations related to improving the Wilderness Areas, Ecological Reserves and Natural Areas Act and the ecological reserves program in general. It was agreed to include these recommendations in the committee's Ninth Annual Report. Those recommendations are presented on page 14 of this document, with details following on pages 15 to 19. Information presented to the advisory committee in September of 1990 formed much of the basis upon which those recommendations were developed.

At this meeting, the content of the Eighth Annual Report of the advisory committee was also finalized.

ADVISORY COMMITTEE RECOMMENDATIONS

The following recommendations reflect nine areas in which the ecological reserves program can be improved. They are the result of the Advisory Committee listening to presentations by the public. The details of each recommendation are contained in the **"Appendix"** which follows.

1. **Plain Language**

   The act is difficult to understand and confusing for people to read. We recommend the act be reorganized and rewritten in plain language, and that several points be clarified.

2. **Site Selection**

   The logic for selecting sites and for the evaluation of suitable sites is not evident to the public. We recommend that a logical plan be developed for the establishment of both representative and special ecological reserves.

3. **Viability of Ecological Reserves**

   The public is concerned about the ability of some ecological reserves to survive the impacts of changes going on outside the reserves. We share this concern.

4. **Management Plans**

   Adequate management plans are essential to the ongoing health of each reserve. The public interest would best be served by stipulating the requirement for management plans in the act.

5. **Reserve Management**

   The act should be strong and easy to enforce. The act has no mechanism for appointing managers or officers, or applying the restrictions of the act. Many reserves lack adequate inventories and staff for their management.

6. **Access**

   Public travel on a reserve should be by foot. We see a need for close control over vehicles, motor boats and horses when used for managment purposes.

7. **Land Use**

   The act presently prohibits some activities while providing a measure of flexibility to consider other uses where they are valuable aids to management. We support the need for this flexibility and recommend that certain activities be: (a) allowed if there is a demonstrated and justifiable management need, (b) prohibited, or (c) allowed at the discretion of the managing agency.

8. **Public Review**

   We believe public review is valuable, and we support increased public scrutiny and review of initiatives within the Ecological Reserve Program and other protected areas programs in the province.

9. **Inter-Agency Coordination**

   We believe coordination among agencies in the establishment and management of ecological reserves is generally good. We are concerned about the impact of other land use and development decisions on neighboring ecological reserves and recommend that mechanisms be developed whereby these potential impacts can be considered.

APPENDIX

Recommendation 1: Plain Language

1.1 The preamble to the act should be revised to include broad definitions, descriptions, purposes and objectives of wilderness areas, ecological reserves and natural areas.

1.2 The language used in the act should be clear and concise.

1.3 The act should be re-organized so that statements which are common to all three types of land are located at the beginning of the act. Statements that apply exclusively to wilderness areas, ecological reserves or natural areas should be included later in the act under separate headings for those types of land.

1.4 The definition and purpose of buffer zones in the act needs to be clarified to reflect their intention to function as "transition land use zones" whereby the integrity of an ecological reserve can be maintained by providing a measure of control on adjacent land use activities.

1.5 The name of the act should be re-titled "Wilderness Areas, Ecological Reserves and Natural Areas Protection Act".

1.6 The act should be re-formatted to give greater profile to existing appeal mechanisms such as the 60-day waiting period and the Environment Council of Alberta's public hearing process currently outlined in the act.

Recommendation 2: Site Selection

2.1 The purposes, relationships and distinctions among the various types of "protected lands" (e.g., natural areas, ecological reserves, wilderness areas, wildlife sanctuaries) should be defined.

2.2 A systems plan should be developed which identifies natural resource values and features that should be protected in an overall network of protected lands. The plan will help to establish values that need to be protected by new ecological reserves and identify priorities for data collection. Identification of some potential sites for ecological reserves and other types of protected lands in a systems plan would enable more effective land-use planning to occur relative to proposed resource uses on Crown lands in the province.

2.3 The systems plan should outline a program for establishment of both "representative" and "special" ecological reserves. The plan would:

- become government policy,
- be available to the public,
- be subject to periodic updates,
- form the basis for the future of the program, and
- be based on reasonable biological and inventory data.

2.4 The identification and establishment of "representative ecological reserves" as identified through the systems plan should be a priority.

2.5 The process for selection of an ecological reserve should include a documentation of alternative sites that were considered, and the reasons for choosing certain sites over others.

2.6 Make provisions in the act which would allow federal and private lands to be considered and established as ecological reserves, where the owner of the land (and any freehold mineral rights owner) agrees to it. Explore mechanisms such as conservation easements and caveats to title.

Recommendation 3: Viability of Ecological Reserves

3.1 Both the size and boundary of an ecological reserve should relate to the purpose for its establishment. Ecological reserves should be of sufficient size to allow ecosystems within them to function properly.

3.2 When determining ecological reserve boundaries, factors such as the following should be resolved and stated in the Order in Council:

- resources and ecosystems that are considered essential for the reserve.
- management decisions on issues such as special features, boundaries, use and access.
- resource uses that are a condition of establishment.

Recommendation 4: Management Plans

4.1 The act should stipulate that management plans be completed for all ecological reserves.

4.2 All ecological reserves should have management plans completed within two years of establishment. Each plan should be tailored to the specific reserve. A mandatory review of these plans should be conducted every five years.

4.3 The committee responsible for preparing a management plan should either have representation from stakeholders or include provisions for obtaining their input. A management plan should include provisions for: (a) monitoring of its recommended actions by appropriate public interest groups, volunteer custodians and stewards, and (b) monitoring the condition of the reserve's resources on an on-going basis.

4.4 The management plan for an ecological reserve should discuss the extent to which other resource uses will be allowed in that reserve. As a general guideline, other resource uses could be allowed if there is a demonstrated and justifiable management need for those activities and if they are compatible with the primary purpose of the ecological reserve, or if continuation of a particular resource use was a condition of reserve establishment. Permitted resource uses must be identified by regulation on a site-by-site basis.

Recommendation 5: Reserve Management

5.1 Have the act included under the Provincial Offences Procedure Act to allow for the provision of specified penalties.

5.2 Include provisions in the act to allow the minister to appoint enforcement officers, including park rangers, fish and wildlife officers, Alberta Forest Service officers and others such as staff of the Special Areas Board. The managing agencies should provide specific training for the appointed enforcement officers in the principles and values of ecological reserves.

5.3 Provide the necessary authority in the act for the minister to make regulations allowing enforcement officers to direct the actions and activities of people while in ecological reserves (e.g., unauthorized use of vehicles, eviction, extinguishing fires).

5.4 Adequate and appropriate biophysical inventories should be completed for all ecological reserves and be updated periodically to maintain currency of information. The condition of each reserve should be monitored.

5.5 Local volunteer custodians and stewards should be encouraged to become involved in the day-to-day operation and supervision of ecological reserves.

Recommendation 6: Access

6.1 Public travel on a reserve should be by foot. Access for vehicles should not normally be permitted. Where vehicles are permitted, access should be restricted to designated routes.

6.2 Revise the act to restrict the use of bicycles in ecological reserves to designated routes.

Recommendation 7: Land Use

7.1 Retain in the act those prohibitions that apply to all ecological reserves and would never be approved as acceptable management tools.

7.2 Through regulation at the time of establishment, identify the primary purpose of each ecological reserve, and the scope and type of uses and management practices which are acceptable on that site.

7.3 The use of natural processes (e.g., burning, flooding) as management tools may be necessary in some cases to restore natural conditions in a particular ecosystem.

7.4 Ensure that the act will not unnecessarily restrict sub-surface rights but still ensure that there will be no surface disturbances as a result of developing those rights.

7.5 The following activities could be allowed in an ecological reserve if there is a demonstrated and justifiable management need for those activities and if they are compatible with the primary purpose of the reserve, or if continuation of a particular resource use was a condition of reserve establishment:

1. heritage appreciation & environmental education
2. scientific research and related collection or removal of biological or physical objects, under permit
3. fishing
4. hunting
5. trapping
6. wildfire control
7. prescribed burning
8. livestock grazing
9. haying
10. operation of vehicles or motor boats for management purposes only
11. prescribed flooding
12. use of horses for management purposes only
13. berrypicking

7.6 The following activities are not acceptable under normal circumstances in an ecological reserve and ministerial approval must be obtained for special exceptions:

1. use of insecticides and herbicides for management purposes
2. water developments and diversions for management purposes

7.7 The following activities are not acceptable in an ecological reserve and should be prohibited:

1. cultivation
2. construction of new roads
3. surface mining
4. quarrying
5. on-site access to subsurface mining *[NOTE: Mineable resources may be extracted beneath an ecological reserve if they can be accessed from locations outside the reserve and if no negative impacts on the reserve will result from such activities.]*
6. introduction of materials or substances which might be harmful to plant or animal life
7. landing an aircraft
8. constructing, maintaining, repairing or operating railways, aircraft landing strips and helicopter bases
9. oil & gas exploration *[NOTE: Exploration can be conducted for oil and gas beneath an ecological reserve if such activities can be conducted from locations outside reserve boundaries and if no negative impacts on the reserve will result from such activities.]*
10. oil & gas development *[NOTE: New facilities for extracting oil and gas resources beneath an ecological reserve may be developed if all facilities are located outside reserve boundaries and if no negative impacts on the reserve will result from such activities. Facilities now existing within ecological reserves for the extraction of oil and gas will be permitted to remain until such time as the resources are depleted.]*
11. littering
12. restoring an area (e.g., re-seeding & re-planting, timber salvage) after natural disasters such as floods, fires and windstorms
13. controlling erosion
14. camping
15. recreational open fires
16. recreational horse use
17. operating vehicles or motor boats for recreational purposes
18. logging

7.8 The following activities are acceptable in an ecological reserve and may be allowed at the discretion of the managing agency or the on-site manager provided they do not involve facility or trail development:

1. hiking
2. cross-country skiing
3. snowshoeing

Recommendation 8: Public Review

8.1 Before establishing an ecological reserve, a brief outline should be prepared of the principles that might govern how that reserve would be managed and this outline should be made available prior to and at public meetings.

8.2 Revise the act to include newspapers from Grande Prairie and Fort McMurray.

8.3 Any regulations prepared under the Act should be subject to public scrutiny and review prior to enactment.

8.4 Once every five years there needs to be a public review of the progress attained within the protected area's programs of the government in general and within the ecological reserves program in particular.

Recommendation 9: Inter-Agency Coordination

9.1 Interdepartmental mechanisms should be developed which will ensure that potential impacts on existing ecological reserves are considered during any review of proposals for industrial and commercial developments. These reviews include Environmental Impact Assessments and hearings of the Natural Resources Conservation Board or the Energy Resources Conservation Board.